## -continued

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- 1. A method of treating a subject who has a synucleinopathy, the method comprising:
  - administering to a subject in need of such treatment therapeutically effective amounts of a  $\beta$ 2-adrenoreceptor agonist and at least one therapeutic agent selected from the group consisting of: a synucleinopathy therapeutic agent, a  $\beta$ 2-adrenoreceptor antagonist, and a health supplement, wherein the health supplement is selected from the group consisting of caffeine, inosine, creatine, coenzyme Q 10, vitamin E, and omega-3 fatty acids, to thereby treat the synucleinopathy in the subject.
- 2. The method of claim 1, wherein the method further comprises identifying the subject as having a synucleinopathy, prior to administering.
- 3. The method of claim 1, wherein the method comprises administering a  $\beta$ 2-adrenoreceptor agonist, a synucleinopathy therapeutic agent and at least one of the health supplements.
- **4**. The method of claim **1**, wherein the  $\beta$ 2-adrenoreceptor agonist is a blood brain penetrant  $\beta$ 2-adrenoreceptor agonist.
- 5. The method of claim 1, wherein the  $\beta$ 2-adrenoreceptor agonist is selected from the group consisting of bitolterol, fenoterol, isoprenaline, levosalbutamol, orciprenaline, pirbuterol, procaterol, ritodrine, salbutamol, terbutaline, arformoterol, bambuterol, clenbuterol, formoterol, salmeterol, abediterol, carmoterol, indacaterol, olodaterol, vilanterol, metaproterenol, mabuterol, and zilpaterol.
- **6**. The method of claim **1**, wherein the  $\beta$ 2-adrenoreceptor agonist is selected from the group consisting of metaproterenol, clenbuterol and salbutamol.

- 7. The method of claim 1, wherein the synucleinopathy therapeutic agent is selected from the group consisting of levodopa, carbidopa, entacapone, ropinirole, rotigotine, pramipexole, bromocriptine, rasagiline, selegiline, amantadine and trihexphenidyl.
- **8**. The method of claim **1**, wherein the method comprises administering a  $\beta$ 2-adrenoreceptor agonist and a  $\beta$ 2-adrenoreceptor antagonist.
- 9. The method of claim 8, wherein the  $\beta$ 2-adrenoreceptor antagonist does not penetrate the blood brain barrier.
- 10. The method of claim 8, wherein the  $\beta$ 2-adrenoreceptor antagonist is selected from the group consisting of carteolol, carvedilol, labetalol, nadolol, penbutolol, pindolol, sotalol, timolol, oxprenolol and butaxamine.
- 11. The method of claim 1, further comprising administering therapeutically effective amounts of riluzole hydrochloride, or a pharmaceutically acceptable salt, prodrug, or isomer thereof.
- 12. The method of claim 1, wherein the  $\beta$ 2-adrenoreceptor agonist and the at least one therapeutic agent are administered simultaneously to the subject; wherein the  $\beta$ 2-adrenoreceptor agonist is administered to the subject prior to administration of the at least one therapeutic agent; or wherein the at least one therapeutic agent is administered to the subject prior to administration of the  $\beta$ 2-adrenoreceptor agonist.
- 13. The method of claim 1, wherein the subject has Parkinson's disease,
- **14**. The method of claim **1**, wherein the subject does not have Parkinson's disease.
  - 15.-18. (canceled)

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